

REMARKS

Claim 23 is cancelled. Claim 20 is amended. No new subject matter is added. Claims 1-22 and 24 remain in the case, and reconsideration and allowance of claims 20-22 and 24 is requested in light of the following remarks.

Allowable Subject Matter

Claims 1-19 are indicated to be allowable over the prior art of record.

Claim Rejections – 35 U.S.C. § 102

Claims 20 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,495,025 to Haskell ("Haskell"). The applicants disagree.

In order to anticipate a claim, the identical invention must be shown in as complete detail as contained in the claim. MPEP 2131, citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236 (Fed. Cir. 1989).

Claim 20 is amended to recite that the first trench region is deeper than the second trench region. This feature is fully supported by the original application at claim 23.

Claim 20 is further amended to recite that the semiconductor substrate in the border trench region has a step profile consisting of at least two substantially horizontal surfaces, where one of the at least two substantially horizontal surfaces is deeper than the second trench region and another one of the at least two substantially horizontal surfaces is deeper than the first trench region. The subject matter in this amendment is fully supported by the original application at, e.g., FIGs. 17, 18 and 19.

Contrary to the above feature, in Haskell's alleged border trench region 34, the semiconductor substrate 14 does not have a step profile consisting of at least two substantially horizontal surfaces, where one of the at least two substantially horizontal surfaces is deeper than the second trench region and another one of the at least two substantially horizontal surfaces is deeper than the first trench region. Consequently, Haskell fails to anticipate claim 20 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claim 24 depends from claim 20 and inherently contains the features of claim 20. Consequently, Haskell also fails to anticipate claim 24 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claims 20-21 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,596,608 to Saito ("Saito"). The applicants disagree.

As explained above, amended claim 20 now recites, *inter alia*, that the semiconductor substrate in the border trench region has a step profile consisting of at least two substantially horizontal surfaces.

Contrary to the above feature, in Saito's alleged border trench region 8b (as shown in FIG. 13D), the semiconductor substrate 1 does not have a step profile consisting of at least two substantially horizontal surfaces. Consequently, Saito fails to anticipate claim 20 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claim 23 is cancelled.

Claims 21 and 24 depend from claim 20 and inherently contain the features of claim 20. Consequently, Saito also fails to anticipate claims 21 and 24 because it does not show the identical invention in as complete detail as contained in the claims. MPEP 2131.

Claim Rejection -- 35 U.S.C. § 103

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito as applied to claim 20 above, and further in view of U.S. Patent 5,576,226 to Hwang ("Hwang") or U.S. Patent 6,780,715 to Jeong ("Jeong"). The applicants disagree.

Claim 22 depends from claim 20, and inherently contains the features of claim 20. Claim 20 is not alleged to be obvious in light of the Saito/Hwang or Saito/Jeong combination, nor is it. Neither Hwang nor Jeong teach the feature of claim 20 that Saito fails to teach (see, e.g., Hwang FIG. 2b and Jeong FIG. 4g, where it is apparent that the semiconductor substrate in a border trench region does not have a step profile consisting of at least two substantially horizontal surfaces. Consequently, the Saito/Hwang and Saito/Jeong combinations fail to establish *prima facie* obviousness for claim 20 because they do not teach all the features recited in the claim. MPEP 2143.03.

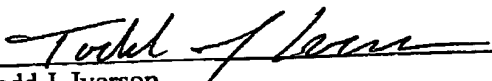
Furthermore, the Saito/Hwang and Saito/Jeong combinations fail to establish *prima facie* obviousness for claim 22 because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03, citing In re Fine, 837 F.2d 1071 (Fed. Cir. 1988).

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 20-22 and 24 is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.


Todd J. Iverson
Reg. No. 53,057

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
503-222-3613
Customer No. 20575

